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Moberly, W.J., Transmission electron microscopy of the interaction of dislocations and mechanical twinning during subgrain formation in $Ti_{50}Ni_{47}Fe_3$ 30 (1989) 395
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Mori, N., T. Oikawa, T. Katoh, J. Miyahara and Y. Harada, Application of the "imaging plate" to TEM recording 25 (1988) 195
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Morrison, T.I., M.B. Brodsky and N.J. Zaluzec, EELS as a probe of d-band occupancy in magnetic alloys 22 (1987) 125
Mory, C., C. Colliex and J.M. Cowley, Optimum defocus for STEM imaging and microanalysis 21 (1987) 171
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interactions in ferritic steels under irradiation 22 (1987) 281
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Orloff, J., Survey of electron sources for high-resolution microscopy 28 (1989) 88
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Ou, H.-J. and J.M. Cowley, SREM of MgO crystal surface structure and in-situ-deposited metallic particles on MgO surface 22 (1987) 207
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Ouyang, F. and M. Isaacson, Design of a high-performance Auger spectrometer for the STEM 28 (1989) 201

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Pan, M., J.M. Cowley and J.C. Barry, Coherent electron microdiffraction from small metal particles 30 (1989) 385
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Peng, L.-M., REM observation of electron-beam-induced reactions on GaAs(110) surface 27 (1989) 423
Peng, L.-M., J.M. Cowley and T. Hsu, Reflection electron imaging of free surfaces and surface/dislocation interactions 29 (1989) 135
Peng, L.-M. and J.M. Cowley, Thermal diffuse scattering and REM image-contrast preservation 29 (1989) 168
Pennycook, S.J., Delocalization corrections for electron channeling analysis 26 (1988) 239
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Pérez-Ramírez, J.G., A. Gómez, V. Castaño and M. José-Yacamán, The use of digital side-band image processing to produce topographic contrast 25 (1988) 41
Perkins, J., K. Adachi, M.-H. Wu and T. Yamashita, TEM studies of transformation interfaces and substructures in some copper-based shape-memory alloys 30 (1989) 217

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Pradère, P., J.F. Revol, L. Nguyen and R. St. John Manley, Lattice imaging of poly-4-methyl-pentene-1 single crystals; use and misuse of Fourier averaging techniques 25 (1988) 69
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Ramussen, D.R., Y.K. Simpson, K. Kilaas and C.B. Carter, Contrast effects at grooved interfaces 30 (1989) 52
Rask, J.H., B.A. Miner and P.R. Buseck, Determination of manganese oxidation states in solids by electron energy-loss spectroscopy 21 (1987) 321
Rasmussen, D.R., N.-H. Cho, D.W. Susnitzky and C.B. Carter, Determination of the lattice translation across antiphase boundaries 30 (1989) 27
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Reimer, L., I. Fromm and R. Rennekamp, Operation modes of electron spectroscopic imaging and electron energy-loss spectroscopy in a transmission electron microscope 24 (1988) 339
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Robota, H.J., R.W. Broach, J.W.A. Sachtler and S.A. Bradley, Characterization of model Pt–Rh automative exhaust control catalysts by EXAFS, STEM and XRD 22 (1987) 149
Rodenburg, J.M., Properties of electron microdiffraction patterns from amorphous materials 25 (1988) 329
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Sevely, J., Theoretical analysis of inelastic electron scattering (summary) 28 (1989) 72
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Sharma, R. and L. Eyring, Rubidium chromium fluoride structures of the hexagonal tungsten bronze type 22 (1987) 81
Sharma, R., J.C. Barry and L. Eyring, Electron-induced decomposition of rubidium chromium fluoride 23 (1987) 453
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Shiojiri, M., T. Isshiki, K. Okashita, Y. Hirota, T. Maeda and S. Sekimoto, High-resolution transmission electron microscopic observations of grain boundaries and surfaces on Cu–Te crystals grown by a solid-solid reaction 23 (1987) 355
Shiojiri, M., T. Isshiki and Y. Hirota, Surface profile images of Te crystals by high-resolution transmission electron microscopy 30 (1989) 329
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Shuman, H. and A.P. Somlyo, Electron energy loss analysis of near-trace-element concentrations of calcium 21 (1987) 23
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Sinclair, R., M.A. Parker and K.B. Kim, In situ high-resolution electron microscopy reactions in semiconductors 23 (1987) 383
Skiff, W.M., R.W. Carpenter, S.H. Lin and A. Higgs, K, L, M, N, O and P ionization cross-sections for electron energy loss spectroscopy 25 (1988) 47

Skjerpe, P., J. Gjønnes and Y. Langsrud, Solidification structure and primary Al–Fe–Si particles in direct-chilled-cast aluminium alloys 22 (1987) 239
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Smith, D.A., K.N. Tu and B.Z. Weiss, Crystallization, resistivity and microstructure of co-deposited metal–silicon thin film alloys 23 (1987) 405
Smith, D.A., Grain boundary structure and migration 29 (1989) 1
Smith, D.A., Z. Elgat, W. Krakow, A.A. Levi and C.B. Carter, Multiple structures in a $\Sigma = 27$ related boundary in germanium 30 (1989) 8
Smith, D.A., see Norden 30 (1989) 33
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Soria, F., P. Artal, J. Bescos and K. Heinemann, Digital image processing of nanometer-size metal particles on amorphous substrates 24 (1988) 19
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Stemmer, A., A. Engel, R. Häring, R. Reichelt and U. Aebi, Miniature-size scanning tunneling microscope with integrated 2-axes heterodyne interferometer and light microscope 25 (1988) 171
Stemmer, A., A. Hefti, U. Aebi and A. Engel, Scanning tunneling and transmission electron microscopy on identical areas of biological specimens 30 (1989) 263
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Strane, J., L.D. Marks, D.E. Luzzi, M.I. Buckett, J.P. Zhang and B.W. Wessels, Encapsulation, diffusion and DIET in the electron microscope 25 (1988) 253
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Strauss, M.G., I. Naday, I.S. Sherman and N.J. Zaluzec, CCD-based parallel detection system for electron energy-loss spectroscopy and imaging 22 (1987) 117
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Szymanski, R. and J. Lynch, Specimen limitations in nanocharacterization by TEM/STEM of industrial heterogeneous catalysts: in situ, irradiation damage and micro/macro correlations 28 (1989) 295

Taftø, J. and J. Gjønnes, Microcrystallography using electron channeling: structure factor phase information and crystal site determination 26 (1988) 97
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Tanaka, M., M. Terauchi and H. Sekii, Observation of dynamic extinction due to a glide plane perpendicular to an incident beam by convergent-beam electron diffraction 21 (1987) 245
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Tanaka, N., M. Nagao and K. Mihama, High resolution electron microscopy of composite films of gold and magnesium oxide 25 (1988) 241
Tanaka, N. and K. Mihama, Nanometer-area electron diffraction of semiconductor superlattices in transmission electron microscopy 26 (1988) 37
Tang Ming, see Fraundorf 27 (1989) 401
Tang, D. and F.H. Li, A method of image restoration for pseudo-weak-phase objects 25 (1988) 61
Tanishiro, Y. and K. Takayanagi, Validity of the kinematical approximation in transmission electron diffraction for the analysis of surface structures 27 (1989) 1
Tanji, T., H. Masaoka, H. Ito, K. Yada and J.M. Cowley, Charging effect on the HRTEM imaging of small MgO crystals 27 (1989) 223
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Titchmarsh, J.M., Specimen considerations, materials science (summary) 28 (1989) 352
Tlomak, P., I. Hannus and W.E. Brower, Jr., RHEED detection of near surface crystalline phases on a $Pd_{80}Si_{20}$ metallic glass surface with adsorbates present 29 (1989) 192
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Toyoshima, C., On the use of holey grids in electron crystallography 30 (1989) 439
Treacy, M.M.J., R.C. Haushalter and S.B. Rice, Transmission electron microscopy study of the reaction of Sn_9^{4-} Zintl ions with single crystal Au films 23 (1987) 135
Treacy, M.M.J., see Disko 23 (1987) 313
Treacy, M.M.J. and J.M. Newsam, Electron beam sensitivity of zeolite L 23 (1987) 411
Treacy, M.M.J., J.M. Gibson, K.T. Short and S.B. Rice, Channeling effects from impurity atoms in the high-angle annular detector of the STEM 26 (1988) 133
Trebbia, P., Unbiased method for signal estimation in electron energy loss spectroscopy, concentration measurements and detection limits in quantitative microanalysis: methods and programs 24 (1988) 399
Trebbia, P., CLEDX: a stand-alone program for quantitative X-ray analysis using the Cliff–Lorimer procedure 27 (1989) 343
Trebbia, P. and T. Manoubi, From experiment to interpretation: confidence limits 28 (1989) 266
Trinick, J. and J. Berriman, Zero-loss electron microscopy with the Zeiss EM902 21 (1987) 393
Troyon, M., Magnetic field emission gun with zirconiated emitter: performances at low voltage 28 (1989) 98
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Trybus, C.L., L.S. Chumbley, W.A. Spitzig and J.D. Verhoeven, Problems in evaluating the dislocation densities in heavily deformed Cu–Nb composites 30 (1989) 315
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Tu, K.N., see Smith 30 (1989) 90
Turner, J.N., D.P. Barnard, G. Matuszek and C.W. See, High-precision tilt stage for the high-voltage electron microscope 26 (1988) 337
Twigg, M.E. and S.N.G. Chu, CBED measurement of lattice mismatch for sub-micron quaternary structures grown on indium phosphide substrates 26 (1988) 51

Uchida, Y. and G. Lehmpfuhl, Observation of double contours of monatomic steps on single crystal surfaces in reflection electron microscopy 23 (1987) 53
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Ugarte, D., see Colliex 29 (1989) 31
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